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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,671	03/11/2005	Tetsuo Nakanishi	TAKIT-196	5243

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Millen White Zelano & Branigan
Arlington Courthouse Plaza I
2200 Clarendon Boulevard
Arlington, VA 22201

EXAMINER

KASSA, TIGABU

ART UNIT	PAPER NUMBER
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1619

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,671	Applicant(s) NAKANISHI ET AL.	
	Examiner TIGABU KASSA	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-36 is/are pending in the application.
- 4a) Of the above claim(s) 3,5 and 7-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 6, and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed August 19, 2008. **Claims 2-36 are currently pending. Claims 2, 4, 6, and 36 are under consideration in the instant office action.** Claims 3, 5, and 7-34 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claims. Claims 3, 5, and newly added claim 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Claims 1 are cancelled. Applicant's amendment has necessitated a new ground of rejection. Accordingly, this Action is FINAL.

Withdrawn rejections:

Applicant's amendments and arguments filed on 12/29/08 are acknowledged and have been fully considered. All rejections applied in the previous office action are hereby withdrawn as a result of applicants claim amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness

Claims 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shioya et al. (US Patent No 5,144,054) in view of Sakuta (WO01/92375) using the equivalent US Patent No. 6747115 for translation.

Applicant Claims

Instant claim 1 recites an organopolysiloxane polymer having a glycerol derivative which can swell up by containing at least its own weight of liquid oil and which has a three dimensional crosslinked structure. In other embodiments, such as instant claim 2, the organopolysiloxane polymer obtained by the addition polymerization of the organohydrogen polysiloxane (a2) $M_2D_{40}D^H_2$ and the glycerol derivative (b1) polyglycerol diallylether as per applicant's species election. Examiner has expanded the species to 10-undecenylglyceryl ether, which is described by Shioya et al. (column 23, line 54, example 10).

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Shioya et al. disclose novel siloxane derivatives having surface active action useful as an emulsifier capable of excellent emulsification stability and having good fitness, good slip, **good cosmetic adhesiveness**, and good usage feeling (column 2, lines 6-12). Shioya et al. disclose an organopolysiloxane polymer having a glycerol derivative (column 23, example 10, lines 50-53), which addresses the limitations of instant claims 1-2, specifically the variables recited in instant claim 2, for (a2) where $1.0 \leq d \leq 2.3$, $0.001 \leq e \leq 1.0$ and R^1 is a substituted or unsubstituted monovalent hydrocarbon group having 1-30 carbon atoms, furthermore, for (b1) where f is an integer from 2-10 and R^3 is an alkenyl group having 2-20 carbon atoms have been addressed by the teachings of Shioya et al.

***Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)***

Shioya et al. do not teach the polymer as having a three dimensional crosslinked structure. This deficiency is cured by Sakuta (US Patent 6747115).

Sakuta teaches a silicone polymer that is insoluble in organic solvents due to its three dimensional crosslinked structure which swells up relative to fluorsilicone oils (abstract). The polymer includes an organohydrogen polysiloxane of formula a2 which is the same as the instantly selected species a2 (column 2, line 30).

***Finding of Prima Facie Obviousness Rationale and Motivation
(MPEP §2142-2143)***

It would have been prima facie obvious to the ordinarily skilled artisan to crosslink the organopolysiloxane of Shioya et al. because Sakuta teach the crosslinking of silicone polymers (abstract). The skilled artisan would have been motivated to crosslink the polymer so as to achieve excellent water and oil repellence wherein the polymer swells relative to the oils

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(column 2, lines 10-14 and lines 5-7) and thereby achieve a more stable, functional cosmetic composition. The skilled artisan would have a reasonable expectation of success because crosslinking polymers, including polyorganosiloxanes, is well known in the art as evidenced by Sakuta. Moreover, the polymers disclosed by Sakuta and Shioya et al. are similar polymers which both contain the instantly selected species a2.

Claims 2, 4, 6, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al. (US Patent No 5,144,054) in view of Sakuta (WO01/92375) and Harai et al. (European Patent Specification 0350951, IDS reference).

Applicant Claims

Instant claim 1 recites an organopolysiloxane polymer having a glycerol derivative which can swell up by containing at least its own weight of liquid oil and which has a three dimensional crosslinked structure. In other embodiments, such as instant claim 2, the organopolysiloxane polymer obtained by the addition polymerization of the organohydrogen polysiloxane (a2) $M_2D_{40}D^H_2$ and the glycerol derivative (b1) polyglycerol diallylether as per applicant's species election. Instant claim 4 recites in the organopolysiloxane polymer the glycerol derivative as per applicant's species election (b1) is a polyglycerol diallylether of the structure provided in the instant claim where s is an integer from 1-20. Instant claim 6 recites the organopolysiloxane polymer comprises organohydrogen polysiloxane a(2) $M_2D_{40}D^H_2$ and glycerol derivative b(1) polyglycerol diallylether having an alkenyl group.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Shioya et al. and Sakuta have been set forth above in the instant office action and are herein incorporated by reference.

Harai et al. disclose a silicone rubber adhesive comprising a silicone rubber composition comprising an organohydrogen polysiloxane component (page 3, line 6) and a partial allyl ether of a multivalent of alcohol component which functions to impart tack (adhesiveness) to the uncured adhesive, and with other components of the composition to improve the durability of adhesion for various substrates (page 4, lines 6-9). Harai et al. disclose an example of polyglycerol diallylether **diglycerol diallyl ether** (page 4, line 13).

***Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)***

Shioya et al. lacks the teaching of the glycerol derivative polyglycerol diallylether. This deficiency is cured by the teachings of Harai et al.

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

It would have been prima facie obvious to the ordinarily skilled artisan to crosslink the organopolysiloxane of Shioya et al. because Sakuta teach the crosslinking of silicone polymers. The skilled artisan would have been motivated to crosslink the polymer so as to achieve excellent water and oil repellence wherein the polymer swells relative to the oils and thereby achieve a more stable, functional cosmetic composition. The skilled artisan would have a reasonable expectation of success because crosslinking polymers, including polyorganosiloxanes, is well known in the art as evidenced by Sakuta. Moreover, the polymers disclosed by Sakuta and Shioya et al. are similar polymers which both contain the instantly selected species a2.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shioya et al. and Harai et al., because Harai et al. teach that in a composition comprising organohydrogen polysiloxane component (page 3, line 6) the incorporation of a partial allyl ether such as **diglycerol diallyl ether** (page 4, line 13) of a multivalent of alcohol component functions impart tack (adhesiveness) to the uncured adhesive and with other components of the composition improves the durability of adhesion for various substrates (page 4, lines 6-9). The skilled artisan would be motivated to combine the teachings, because imparting tack (adhesiveness) to the organohydrogen polysiloxane allows these polymers to be useful emulsifiers with excellent emulsification stability with good cosmetic adhesiveness. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shioya et al. and Harai et al., because it is desirable to utilize for example **diglycerol diallyl ether** which has two available double bonds for polymerization, since one of the double bond can cross-link to the organohydrogen siloxane polymer and the other one would be available for further cross-linking and polymerization. A skilled artisan would have had a reasonable expectation of success upon combination of the prior art teachings, because both of the teachings comprise a similar organohydrogen siloxane polymer and glycerol derivative components. Furthermore, both teachings strive for a better organohydrogen siloxane polymer with excellent adhesiveness for various purposes. Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because the combined teachings of the prior art is fairly suggestive of the claimed invention.

Conclusion

Claims 2, 4, 6, and 36 are rejected, while claims 3, 5, and 7-35 are withdrawn. No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIGABU KASSA whose telephone number is (571)270-5867. The examiner can normally be reached on 9 am-5 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tigabu Kassa

04/11/09

/PORFIRIO NAZARIO GONZALEZ/
Primary Examiner, Art Unit 1621